

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 (currently amended). A method of selecting an intensity threshold for an image halftoning system having an accumulated error assigned to at least one pixel of an image, where said error is based upon a comparison between a pixel value of an input image and a corresponding pixel value of an output image, said method comprising the steps of:

- (a) selecting a first intensity threshold if a said accumulated error of at least one current pixel and a neighboring pixel exceeds a first error threshold;
- (b) selecting a second intensity threshold if a said accumulated error of a pixel remotely neighboring said current pixel exceeds a second error threshold and said first intensity threshold is not selected; and
- (c) selecting a third intensity threshold if neither of said first and said second intensity thresholds are selected.

2 (original). The method of claim 1 wherein at least one of said first and said second error thresholds is substantially zero error.

3 (original). The method of claim 1 wherein an intensity of said first intensity threshold is greater than an intensity of said second intensity threshold and said intensity of said second intensity threshold is greater than an intensity of said third threshold.

4 (previously presented). The method of claim 1 wherein at least one of said accumulated error of said first pixel, said neighboring pixel, and said remote neighboring pixel comprises a component color error for said pixel.

5 (currently amended). A halftone image display method having an accumulated pixel error assigned to at least one pixel of an image, where said error is based upon a comparison between a pixel value of an input image and a corresponding pixel value of an output image, said method comprising the steps of:

- (a) determining an intensity of a current pixel in an image;
- (b) augmenting said intensity of said current pixel with a current said accumulated pixel error;
- (c) selecting a first intensity threshold if at least one of said current said accumulated pixel error and a neighboring said accumulated pixel error is less than an error threshold and otherwise selecting a second intensity threshold;
- (d) displaying said current pixel with one of a first displayed intensity if said augmented intensity of said current pixel exceeds said selected intensity threshold and otherwise displaying said current pixel with a second displayed intensity; and
- (e) assigning a said accumulated error between said displayed intensity and said augmented intensity of said current pixel to at least one pixel neighboring said current pixel.

6 (original). The method of claim 5 wherein said error threshold is substantially zero error.

7 (previously presented). The method of claim 5 wherein said first displayed intensity comprises a maximum intensity and said second displayed intensity comprises a minimum intensity.

8 (original). The method of claim 5 wherein said intensity of said current pixel comprises an intensity of a color component of said pixel.

9 (original). The method of claim 5 wherein an intensity of said first intensity threshold is greater than an intensity of said second intensity threshold.

10 (original). The method of claim 5 further comprising the step of displaying said current pixel with said first displayed intensity if said augmented intensity of said current pixel exceeds a third intensity threshold, an intensity of said third intensity threshold being greater than an intensity of said first intensity threshold.

11 (previously presented). The method of claim 5 wherein at least one of said current said accumulated pixel error and said neighboring accumulated pixel error comprises a component color error.

12 (currently amended). An error diffusion halftone image display method comprising the steps of:

- (a) determining an intensity of a current pixel in an image;
- (b) augmenting said intensity of said current pixel with a current pixel accumulated error where said error is based upon a comparison between a pixel value of an input image and a corresponding pixel value of an output image;
- (c) selecting a first intensity threshold if at least one of said current pixel accumulated error and an immediate neighboring pixel accumulated error is less than a first error threshold;
- (d) selecting a second intensity threshold if a remote neighboring pixel accumulated error is less than a second error threshold and said first error threshold is not selected;
- (e) selecting a third intensity threshold if a more remote neighboring pixel accumulated error is less than a third error threshold and neither of said first and said second error thresholds are selected;
- (f) selecting a fourth intensity threshold if one of said first, said second, and said third intensity thresholds is not selected;
- (g) displaying said current pixel with one of a first displayed intensity if said augmented intensity of said current pixel exceeds said selected intensity

threshold and otherwise displaying said current pixel with a second displayed intensity; and

- (h) assigning an accumulated error between said displayed intensity and said augmented intensity of said current pixel to at least one pixel neighboring said current pixel.

13 (previously presented). The method of claim 12 wherein at least one of said first, said second, and said third error thresholds is substantially zero accumulated error.

14 (previously presented). The method of claim 12 wherein said first displayed intensity comprises a maximum intensity and said second displayed intensity comprises a minimum intensity for said pixel.

15 (original). The method of claim 12 wherein said intensity of said current pixel comprises an intensity of a color component of said pixel.

16 (original). The method of claim 12 wherein an intensity of said first intensity threshold is greater than an intensity of said second intensity threshold, said intensity of said second intensity threshold is greater than an intensity of said third intensity threshold, and said intensity of said third intensity threshold is greater than an intensity of said fourth intensity threshold.

17 (original). The method of claim 12 further comprising the step of displaying said current pixel with a maximum displayed intensity if said augmented intensity of said current pixel exceeds a fifth intensity threshold, an intensity of said fifth intensity threshold being greater than an intensity of said first intensity threshold.

18 (previously presented). The method of claim 12 wherein at least one of said current pixel accumulated error, said neighboring pixel accumulated error, and said remote neighboring pixel accumulated error comprises a component color error.

19 (original). The method of claim 18 wherein said component color error comprises an error for a component color other than the component color of the current pixel.

20 (currently amended). A halftoning encoder comprising:

- (a) a selected thresholding unit comparing an input intensity of a current pixel to a selected threshold intensity; and
- (b) a threshold selection unit selecting one of a plurality of threshold intensities for said selected threshold unit in response to an accumulated error for at least one of said current pixel and a pixel neighboring said current pixel, where said error is based upon a comparison between a pixel value of an input image and a corresponding pixel value of an output image.

21 (original). The apparatus of claim 20 further comprising an initial thresholding unit comparing said input intensity of said current pixel to an initial threshold intensity, said initial threshold being greater than said selected threshold intensity.

22 (original). The apparatus of claim 20 further comprising:

- (a) an error filter distributing an error produced by printing said current pixel to a plurality of pixels neighboring said current pixel; and
- (b) an error buffer accumulating said distributed error for a pixel.